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*Environmental Protection Division
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Date: January 30, 2008
Refer To: ENV-RCRA-08-023

Mr. James Bearzi
Hazardous Waste Bureau
New Mexico Environment Department
2905 Rodeo Park Drive East, Building 1
Santa Fe, NM 87505-6313

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FEB 4 2008

Dear Mr Bearzi:

SUBJECT: REQUEST FOR "CONTAINED-IN" DETERMINATION FOR INTERMEDIATE GROUNDWATER COLLECTED DURING THE QUARTERLY SAMPLING OF MONITORING WELL CdV-16-2(i)r WITHIN TECHNICAL AREA 16

The purpose of this letter is to request that the New Mexico Environment Department (NMED) Hazardous Waste Bureau use its authority to determine that the purged intermediate perched groundwater and associated sampling waste (i.e., decontamination fluids and contact waste), collected during routine sampling of monitoring well CdV-16-2(i)r, do not warrant management as F-listed hazardous waste, pursuant to the requirements of 20.4.1.200 NMAC §261.31. The Los Alamos National Laboratory (LANL) proposes to disposition the purged groundwater from well CdV-16-2(i)r in accordance with the NMED-approved *Development, Rehabilitation, and Sampling Purge Water Decision Tree* (See enclosure 1).

Well CdV-16-2(i)r was drilled to determine the extent of contamination in intermediate-depth groundwater resulting from the operation of the former TA-16-260 outfall (Solid Waste Management Unit 16-021(c)). The well is located on the mesa-top adjacent to Cañon de Valle, east of regional well R-25. CdV-16-2(i)r was a replacement well for CdV-16-2(i), which did not produce water following its completion. The maximum amount of purged groundwater and decontamination fluid produced annually from well CdV-16-2(i)r is approximately 1,000 gallons. The maximum volume of contact waste from sampling produced annually is approximately 10 gallons. The purged groundwater and associated decontamination fluid, is currently being stored in a less than 90-day accumulation area located near the well. In accordance with Appendix C of the NMED-approved Groundwater Monitoring Plan, the groundwater monitoring samples were used to characterize the purged groundwater, the decontamination water, and the contact waste.

Based on the analytical data, the groundwater is not a characteristic waste; however, it does contain low concentrations of high explosives and very low concentrations of organic constituents.



The origin of the potentially listed organics may be from releases of F-listed solvents from sources in the vicinity of the well. Enclosure 2 to this letter shows all validated organic and high explosives data from the monitoring well. The potential F-listed organic compounds detected in the groundwater are tetrachloroethylene, toluene, and trichloroethene. In accordance with steps D2 through D4 of the Decision Tree, LANL compared maximum detected concentrations from the groundwater monitoring samples of the potentially F-listed organics to:

- Land Disposal Restriction (LDR) Treatment Standards (40 CFR §268.40);
- Human health standards for groundwater listed in 20.6.2.3103 NMAC, issued by the New Mexico Water Quality Control Commission, referred to as the NMWQCC 3103 standards; and
- The Environmental Protection Agency (EPA) Safe Drinking Water Act Maximum Contaminant Levels (MCLs) (40 CFR §141.61).

The comparison is shown in Table 1. The maximum contaminant concentrations are less than these limits and, therefore, the wastewater meets the criteria for requesting a “contained in” determination in accordance with step D4 of the Decision Tree. However, the purge water fails the step D6(3) land application criteria for RDX (maximum concentration of 67.7 µg/l), which exceeds its EPA Region 6 Tap Water Standard of 0.611 µg/l. Comparison to the Tap Water Standards is required because NMWACC 3013 and MCL standards are not available for RDX. Therefore, in accordance with step D7 of the Decision Tree, LANL proposes treatment of the purged groundwater at the Clean Water Act-permitted TA-16 High Explosive Wastewater Treatment Facility (HEWTF). LANL also proposes to treat the associated decontamination fluid at the HEWTF and to manage the associated sampling contact waste as nonhazardous. This “contained in” determination is requested because the HEWTF does not accept F-listed wastewater. If “contained in” is not granted, the wastewater will need to be treated offsite.

According to EPA documents and associated guidance, the authorized state may also make a determination regarding how the LDRs apply to the waste when a “contained-in” determination has been made. Because the maximum detected concentrations in the analytical data used to characterize the contact waste are below their respective LDR treatment standards in 40 CFR §268.40, as shown in Table 1, LANL requests a determination from NMED that, under LDR, the contact waste may be disposed of as nonhazardous waste.

LANL believes that a “contained-in” determination for the F-listed organic constituents shown in Table 1 is appropriate. Treatment of purge water and the associated decontamination fluid at the TA-16 HEWTF, and disposal of the contact waste at a non-hazardous waste landfill is sufficient to protect human health and the environment. Additionally, it would allow for a more cost-effective disposition of the wastes generated from monitoring well CdV-16-2ir.

If you have any questions, please contact me at 667-0666 or Gene Turner at 667-5794.

Sincerely,



Anthony R. Grieggs
Group Leader
Water Quality & RCRA Group (ENV-RCRA)

ARG:AS/lm

Enclosures: a/s

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Bob Beers, ENV-RCRA, K490
EP-CAP Project File, M992
ENV-RCRA, File, K490
IRM-RMMSO, A150

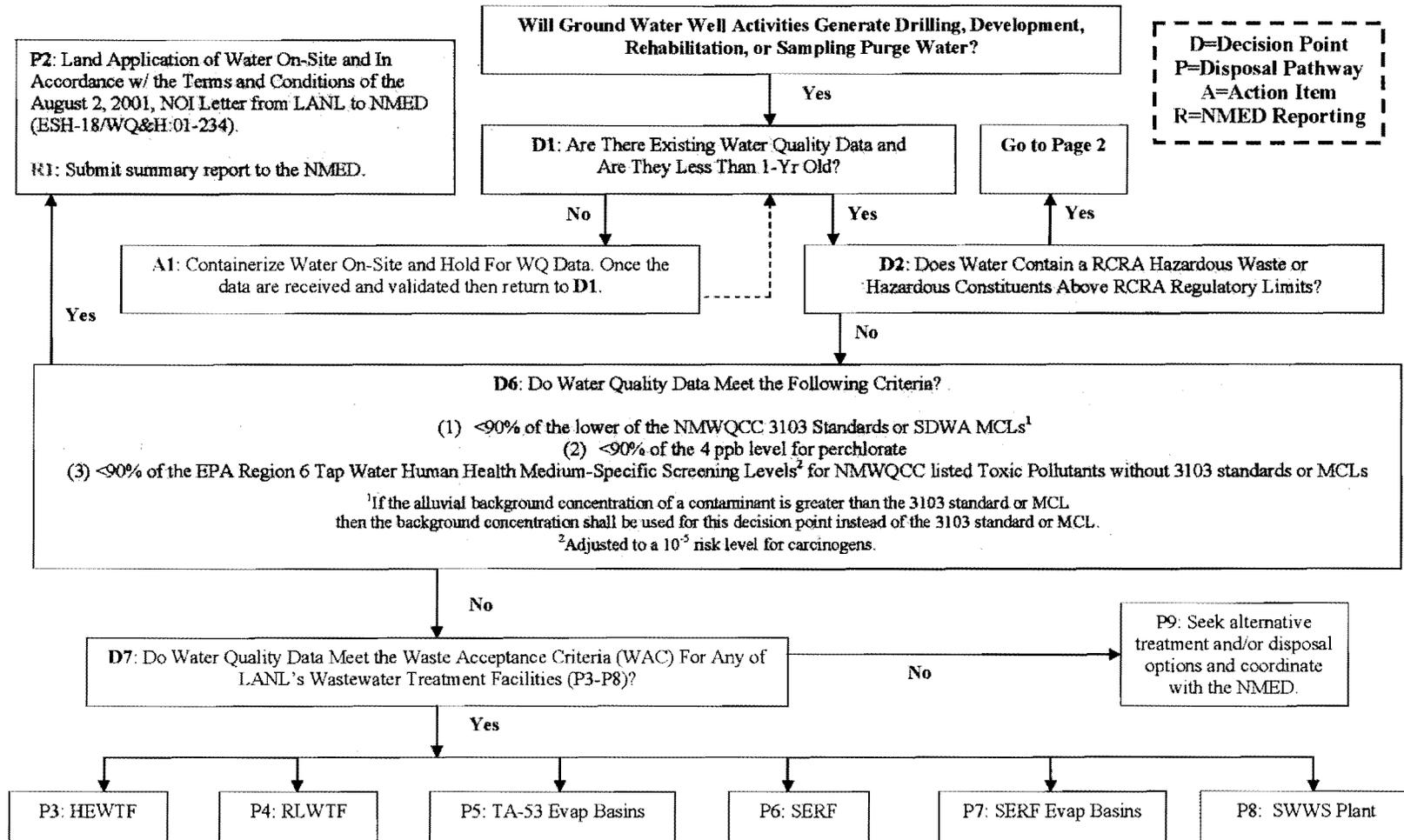
Table 1. Comparison of Potential F-listed Organic Constituents to Groundwater Standards.

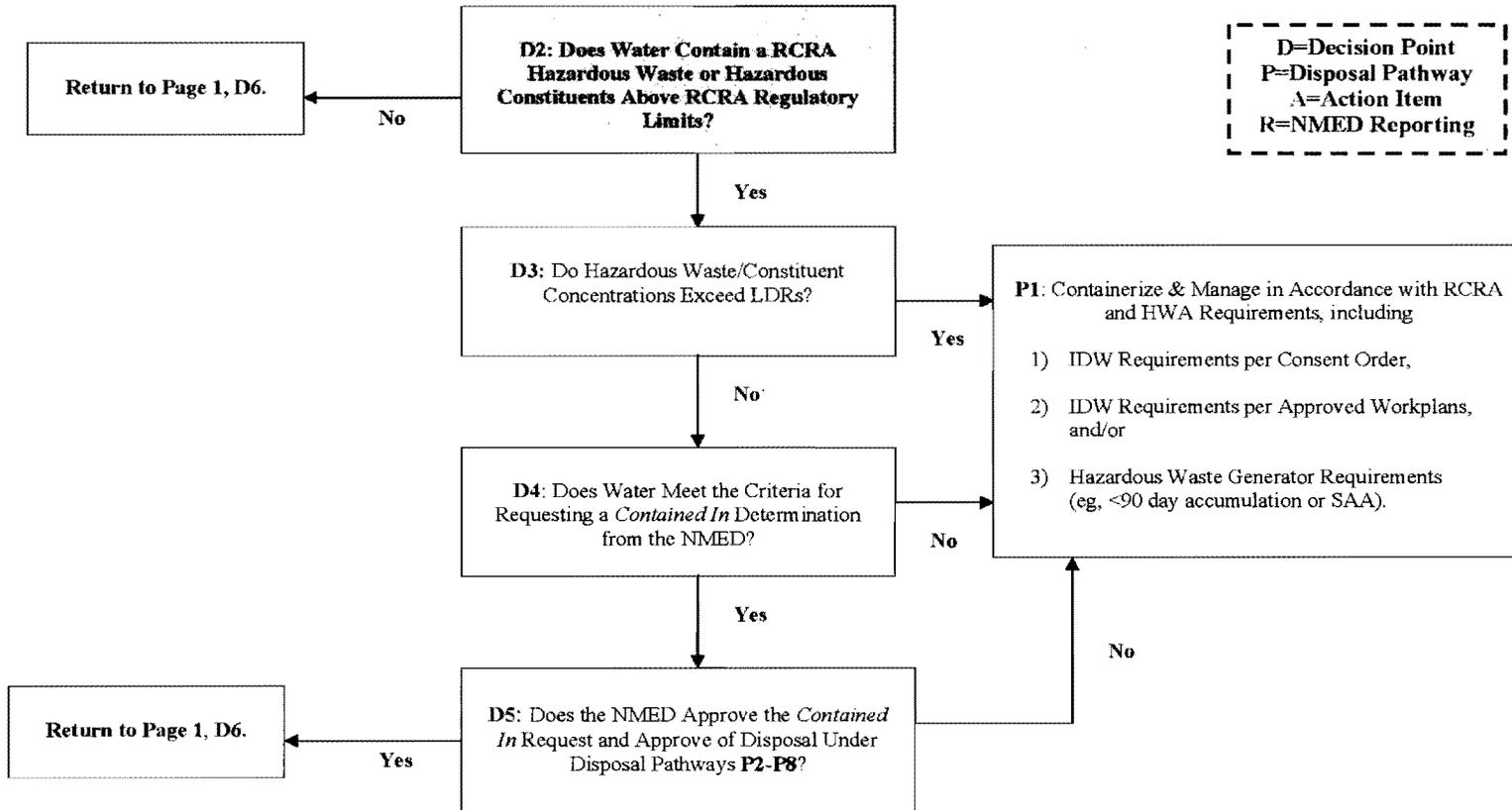
Contaminant	Matrix	Maximum Concentration (µg/l) ¹	NMWQCC 3103 Standards (µg/l)	EPA SDWA MCLs (µg/l)	LDR ² Treatment Standard (µg/l)
Tetrachloroethylene	Liquid	0.583	20	5	56
Toluene	Liquid	8.13	750	1000	80
Trichloroethene	Liquid	0.293	100	5	54

¹µg/l = micrograms per liter

²LDR = Land Disposal Restrictions (LDR Treatment Standards for Hazardous Wastes, Wastewater, as provided in 40 CFR §268.40 and incorporated by 20.4.1.800 NMAC)

Enclosure 1





Enclosure 2

Detected Concentrations of Organic Compounds from Groundwater Samples Collected from Well CdV-16-2(i)r

Location Name	Sample ID	Start Date	Analyte	Result (µg/l)	Lab Qual Code	Validation Code
CdV-16-2(i)r	GU07010162IR01	5-Feb-07	Methyl tert-Butyl Ether	0.31	J	
CdV-16-2(i)r	GU07010162IR20	5-Feb-07	Methyl tert-Butyl Ether	0.264	J	
CdV-16-2(i)r	GU07010162IR01	5-Feb-07	Tetrachloroethene	0.583	J	
CdV-16-2(i)r	GU07050162IR01	10-May-07	Tetrachloroethene	0.487	J	
CdV-16-2(i)r	GU07010162IR20	5-Feb-07	Tetrachloroethene	0.484	J	
CdV-16-2(i)r	GU07010162IR20	5-Feb-07	Toluene	8.13		
CdV-16-2(i)r	GU07010162IR01	5-Feb-07	Toluene	7.08		
CdV-16-2(i)r	GU07050162IR01	10-May-07	Toluene	1.57		
CdV-16-2(i)r	GU07050162IR01	10-May-07	Trichloroethene	0.293	J	
CdV-16-2(i)r	GU07010162IR20	5-Feb-07	Trichloroethene	0.285	J	
CdV-16-2(i)r	SU07010162IR01	5-Feb-07	DNX	0.11	JP	
CdV-16-2(i)r	SU07050162IR01	10-May-07	DNX	0.081	J	
CdV-16-2(i)r	SU07010162IR20	5-Feb-07	DNX	0.079	JP	
CdV-16-2(i)r	GU07100162IR20	23-Oct-07	HMX	0.279	J	J-
CdV-16-2(i)r	GU07050162IR01	10-May-07	HMX	0.269	J	J+
CdV-16-2(i)r	GU07010162IR01	5-Feb-07	HMX	0.257	J	J+
CdV-16-2(i)r	GU07100162IR01	23-Oct-07	HMX	0.254	J	J-
CdV-16-2(i)r	GU07010162IR20	5-Feb-07	HMX	0.25	J	J+
CdV-16-2(i)r	SU07010162IR20	5-Feb-07	MNX	0.27	J	
CdV-16-2(i)r	SU07010162IR01	5-Feb-07	MNX	0.26	J	
CdV-16-2(i)r	SU07050162IR01	10-May-07	MNX	0.23	J	
CdV-16-2(i)r	GU07050162IR01	10-May-07	RDX	67.7		J+, J, J-
CdV-16-2(i)r	GU07100162IR01	23-Oct-07	RDX	61.1		
CdV-16-2(i)r	GU07100162IR20	23-Oct-07	RDX	59.6		J
CdV-16-2(i)r	GU07100162IR01	23-Oct-07	RDX	56.4		J
CdV-16-2(i)r	GU07010162IR01	5-Feb-07	RDX	50		J
CdV-16-2(i)r	GU07010162IR20	5-Feb-07	RDX	43.3		J-, J